



[4910-13-P]

**DEPARTMENT OF TRANSPORTATION**

**Federal Aviation Administration**

**14 CFR Part 39**

**[Docket No. FAA-2012-0491; Directorate Identifier 2011-NM-265-AD]**

**RIN 2120-AA64**

**Airworthiness Directives; The Boeing Company Airplanes**

**AGENCY:** Federal Aviation Administration (FAA), DOT.

**ACTION:** Notice of proposed rulemaking (NPRM).

**SUMMARY:** We propose to adopt a new airworthiness directive (AD) for certain The Boeing Company Model 737-100, -200, and -200C series airplanes. This proposed AD was prompted by a report of a severed upper butt strap, and cracks in the forward skin and bonded doubler, on one airplane. This proposed AD would require repetitive inspections for cracks and a chemical spot test in the area of station (STA) 908, and related investigative and corrective actions, if necessary. For certain airplanes, this proposed AD would require an inspection and modification. We are proposing this AD to prevent cracks at the adjacent mating skins (forward and aft), which could initiate just above stringers S-4R and S-4L; and could grow and result in a decompression event.

**DATES:** We must receive comments on this proposed AD by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE Federal Register].

**ADDRESSES:** You may send comments, using the procedures found in 14 CFR 11.43 and 11.45, by any of the following methods:

- Federal eRulemaking Portal: Go to <http://www.regulations.gov>. Follow the instructions for submitting comments.
- Fax: 202-493-2251.

- Mail: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590.

- Hand Delivery: Deliver to Mail address above between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For service information identified in this proposed AD, contact Boeing Commercial Airplanes, Attention: Data & Services Management, P. O. Box 3707, MC 2H-65, Seattle, Washington 98124-2207; telephone 206-544-5000, extension 1; fax 206-766-5680; e-mail [me.boecom@boeing.com](mailto:me.boecom@boeing.com); Internet <https://www.myboeingfleet.com>. You may review copies of the referenced service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, Washington 98057-3356. For information on the availability of this material at the FAA, call (425) 227-1221.

#### **Examining the AD Docket**

You may examine the AD docket on the Internet at <http://www.regulations.gov>; or in person at the Docket Management Facility between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this proposed AD, the regulatory evaluation, any comments received, and other information. The street address for the Docket Office (phone: 800-647-5527) is in the ADDRESSES section. Comments will be available in the AD docket shortly after receipt.

**FOR FURTHER INFORMATION CONTACT:** Wayne Lockett, Aerospace Engineer, Airframe Branch, ANM-120S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue SW., Renton, Washington 98057-3356; phone: (425) 917-6447; fax: (425) 917-6590; e-mail: [wayne.lockett@faa.gov](mailto:wayne.lockett@faa.gov).

## **SUPPLEMENTARY INFORMATION:**

### **Comments Invited**

We invite you to send any written relevant data, views, or arguments about this proposal. Send your comments to an address listed under the ADDRESSES section. Include “Docket No. FAA-2012-0491; Directorate Identifier 2011-NM-265-AD” at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of this proposed AD. We will consider all comments received by the closing date and may amend this proposed AD because of those comments.

We will post all comments we receive, without change, to <http://www.regulations.gov>, including any personal information you provide. We will also post a report summarizing each substantive verbal contact we receive about this proposed AD.

### **Discussion**

We received a report of a severed upper butt strap, and cracks in the forward skin and bonded doubler, on one airplane. Lab analysis of the upper butt strap identified 7075-T6 alloy, instead of the required 2024-T3 clad material. The airplane had accumulated approximately 61,000 total flight cycles and 58,000 total flight hours. The skin crack was found just above a previously installed lap joint modification. Such cracks, if not detected and corrected, could result in cracks at the adjacent mating skins (forward and aft), which could initiate just above stringers S-4R and S-4L; and could grow and result in a decompression event.

### **Relevant Service Information**

We reviewed Boeing Special Attention Service Bulletin 737-53-1313, dated November 3, 2011. For information on the procedures and compliance times, see this

service information at <http://www.regulations.gov> by searching for Docket No. FAA-2012-0491.

### **FAA's Determination**

We are proposing this AD because we evaluated all the relevant information and determined the unsafe condition described previously is likely to exist or develop in other products of the same type design.

### **Proposed AD Requirements**

This proposed AD would require repetitive inspections (detailed, external low frequency eddy current (LFEC), or internal LFEC) for cracks and a chemical spot test in the area of STA 908, and related investigative and corrective actions, if necessary. Related investigative actions include a detailed inspection for corrosion of the skin, skin doubler, and lower butt strap; an open-hole high frequency eddy current (HFEC) inspection for cracks of the skin, skin doubler, lower butt strap, and stringer splices; and an open-hole HFEC for cracks of the STA 908 upper butt strap. Corrective actions involve repairing, installing a new stringer splice; and installing a new STA 908 upper butt strap.

For airplanes having line numbers 1 through 291, this proposed AD would require actions (inspection and modification) done in accordance with a method approved by the Manager, Seattle Aircraft Certification Office (ACO).

### **Differences Between the Proposed AD and the Service Information**

The service information specifies to contact the manufacturer for instructions on how to repair certain conditions, but this proposed AD would require repairing those conditions in one of the following ways:

- In accordance with a method that we approve; or

- Using data that meet the certification basis of the airplane, and that have been approved by the Boeing Commercial Airplanes Organization Designation Authorization (ODA) whom we have authorized to make those findings.

In addition, Boeing has not provided specific procedures for airplanes having line numbers 1 through 291, but indicates to contact Boeing for instructions “before further flight.” The FAA is aware that only one of these airplanes is currently in operation, and it is a test bed airplane that is not used for revenue flights. This proposed AD requires operators to inspect and modify, as required, in accordance with a method approved by the Manager, Seattle ACO, within 120 days.

### **Costs of Compliance**

We estimate that this proposed AD affects 61 airplanes of U.S. registry.

We estimate the following costs to comply with this proposed AD:

#### **Estimated costs**

<b>Action</b>	<b>Labor cost</b>	<b>Parts cost</b>	<b>Cost per product</b>	<b>Cost on U.S. operators</b>
Inspection and test	166 work-hours X \$85 per hour = \$14,110 per inspection cycle	\$0	\$14,110 per inspection cycle	\$860,710 per inspection cycle

In addition, we have received no definitive data that would enable us to provide cost estimates for the actions that would be required for Group 1 airplanes.

We estimate the following costs to do any necessary related investigative actions, repairs, and installations that would be required based on the results of the proposed inspection and test. We have no way of determining the number of aircraft that might need these actions:

### On-condition costs

Action	Labor cost	Parts cost	Cost per product
Related investigative actions, repair, installation	173 work-hours X \$85 per hour = \$14,705	\$0	\$14,705

According to the manufacturer, some of the costs of this proposed AD may be covered under warranty, thereby reducing the cost impact on affected individuals. We do not control warranty coverage for affected individuals. As a result, we have included all costs in our cost estimate.

### Authority for this Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: "General requirements." Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

### Regulatory Findings

We determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would not have a substantial direct effect on the States, on the relationship between the national Government and the States,

or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify this proposed regulation:

- (1) Is not a “significant regulatory action” under Executive Order 12866,
- (2) Is not a “significant rule” under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979),
- (3) Will not affect intrastate aviation in Alaska, and
- (4) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

#### **List of Subjects in 14 CFR Part 39**

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

#### **The Proposed Amendment**

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 14 CFR part 39 as follows:

#### **PART 39 - AIRWORTHINESS DIRECTIVES**

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

#### **§ 39.13 [Amended]**

2. The FAA amends § 39.13 by adding the following new airworthiness directive (AD):

**The Boeing Company:** Docket No. FAA-2012-0491; Directorate Identifier 2011-NM-265-AD.

#### **(a) Comments Due Date**

We must receive comments by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE Federal Register].

**(b) Affected ADs**

None.

**(c) Applicability**

This AD applies to The Boeing Company Model 737-100, -200, and 200C series airplanes; certificated in any category; as identified in Boeing Special Attention Service Bulletin 737-53-1313, dated November 3, 2011.

**(d) Subject**

Joint Aircraft System Component (JASC)/Air Transport Association (ATA) of America Code 53; Fuselage.

**(e) Unsafe Condition**

This AD was prompted by a report of a severed upper butt strap, and cracks in the forward skin and bonded doubler, on one airplane. We are issuing this AD to prevent cracks at the adjacent mating skins (forward and aft), which could initiate just above stringers S-4R and S-4L; and could grow and result in a decompression event.

**(f) Compliance**

Comply with this AD within the compliance times specified, unless already done.

**(g) Actions for Group 1 Airplanes**

For Group 1 airplanes, as identified in Boeing Special Attention Service Bulletin 737-53-1313, dated November 3, 2011: Within 120 days after the effective date of this AD, inspect and modify, as required, using a method approved in accordance with the procedures specified in paragraph (k) of this AD.

**(h) Actions for Groups 2 and 3 Airplanes**

For Groups 2 and 3 airplanes, as identified in Boeing Special Attention Service Bulletin 737-53-1313, dated November 3, 2011: Except as provided by paragraph (i)(1) of this AD, at the applicable times identified in paragraph 1.E., "Compliance," of Boeing Special Attention Service Bulletin 737-53-1313, dated November 3, 2011, do the actions



specified in paragraphs (h)(1) and (h)(2) of this AD, in accordance with the Accomplishment Instructions of Boeing Special Attention Service Bulletin 737-53-1313, dated November 3, 2011, except as provided by paragraph (i)(2) of this AD.

(1) Do one of the inspection options identified in paragraphs (h)(1)(i), (h)(1)(ii), and (h)(1)(iii) of this AD; and do all applicable related investigative and corrective actions. Do all applicable related investigative and corrective actions before further flight.

(i) Inspection Option 1: Do a detailed inspection for cracks of the station (STA) 908 forward and aft skin. Thereafter, repeat the inspection at intervals not to exceed 500 flight cycles until the chemical spot test required by paragraph (h)(2) of this AD is done.

(ii) Inspection Option 2: Do a one-time external low-frequency eddy current (LFEC) inspection for cracks of the STA 908 upper butt strap.

(iii) Inspection Option 3: Do a one-time internal LFEC inspection for cracks of the STA 908 upper butt strap.

(2) Do a chemical spot test of the STA 908 upper butt strap to determine the part material, and do all applicable related investigative and corrective actions. Do all applicable related investigative and corrective actions at the times specified in paragraph 1.E., "Compliance," of Boeing Special Attention Service Bulletin 737-53-1313, dated November 3, 2011, except as provided by paragraph (i)(1) of this AD. Confirming the upper butt strap is made from 2000 series aluminum terminates the inspections required by paragraph (h)(1) of this AD.

**(i) Exceptions to the Service Information**

(1) Where Boeing Special Attention Service Bulletin 737-53-1313, dated November 3, 2011, specifies a compliance time "after the original issue date of the service bulletin," this AD requires compliance within the specified compliance time after the effective date of this AD.

(2) Where Boeing Special Attention Service Bulletin 737-53-1313, dated November 3, 2011, specifies to contact Boeing for repair instructions: Before further flight, repair using a method approved in accordance with the procedures specified in paragraph (k) of this AD.

**(j) Terminating Action**

Replacing the STA 908 upper butt strap and doing all applicable related investigative and corrective actions, in accordance with Part 4, Part 5, and Part 6, in accordance with the Accomplishment Instructions of Boeing Special Attention Service Bulletin 737-53-1313, dated November 3, 2011, except as provided by paragraph (i)(2) of this AD, terminates the inspections and chemical spot test required by this AD.

**(k) Alternative Methods of Compliance (AMOCs)**

(1) The Manager, Seattle Aircraft Certification Office (ACO), FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the ACO, send it to the attention of the person identified in the Related Information section of this AD. Information may be e-mailed to: [9-ANM-Seattle-ACO-AMOC-Requests@faa.gov](mailto:9-ANM-Seattle-ACO-AMOC-Requests@faa.gov).

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

(3) An AMOC that provides an acceptable level of safety may be used for any repair required by this AD if it is approved by the Boeing Commercial Airplanes Organization Designation Authorization (ODA) that has been authorized by the Manager, Seattle ACO, to make those findings. For a repair method to be approved, the repair must

meet the certification basis of the airplane, and the approval must specifically refer to this AD.

**(l) Related Information**

(1) For more information about this AD, contact Wayne Lockett, Aerospace Engineer, Airframe Branch, ANM-120S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue SW., Renton, Washington 98057-3356; phone: (425) 917-6447; fax: (425) 917-6590; e-mail: [wayne.lockett@faa.gov](mailto:wayne.lockett@faa.gov).

(2) For service information identified in this AD, contact Boeing Commercial Airplanes, Attention: Data & Services Management, P. O. Box 3707, MC 2H-65, Seattle, Washington 98124-2207; telephone 206-544-5000, extension 1; fax 206-766-5680; e-mail [me.boecom@boeing.com](mailto:me.boecom@boeing.com); Internet <https://www.myboeingfleet.com>. You may also review the referenced service information in the docket at [www.regulations.gov](http://www.regulations.gov) (refer to Docket No. FAA-2012-0491). You may review copies of the referenced service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, Washington. For information on the availability of this material at the FAA, call (425) 227-1221.

Issued in Renton, Washington, on May 18, 2012.

Michael Kaszycki,  
Acting Manager,  
Transport Airplane Directorate,  
Aircraft Certification Service.

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